THE PORT AUTHORITY OF NY & NJ Memorandum

To: Robert Linn, Deputy Director for Physical Facilities, WTC
From: Harry R. Pool, Jr.
Date: March 13, 1985
Subject: RENOVATION - 36TH FLOOR - WORLD TRADE CENTER
Reference:
Copy To: N. Budeiri, R. Fagin, M.D., L. Feld

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As a follow-up of our conversation of March 8, 1985, the following investigation of the renovation of the 36th floor, West section of the World Trade Center was conducted by Austin Kreutz, Charles Agro and Philip Taylor. The results are as follows:

Austin Kreutz and Charles Agro visited the 36th floor West section on March 8, 1985 in the early afternoon and took 3 bulk samples of material from the ceiling. At that time, approximately 6 individuals were working in the area without respiratory protection. It was noted that the ceiling was encapsulated. The bulk samples were identified as chrysotile asbestos in the Inspection and Safety Environmental Laboratory.

Charles Agro returned to the 36th floor at 1:30 p.m. for airborne sampling. He noted that in the North West section of the room, sprinkler pipes were being installed by a worker without respiratory protection and insulation material damaged around the sprinkler pipe area. Two other employees were wrapping insulating material around duct work and were destroying the integrity of the ceiling insulation. Also a metal stud wall was constructed from floor to ceiling in the South East end of the area, damaging the ceiling insulation. The airborne sample reading was 0.03/cc.

Charles Agro and Austin Kreutz met with Lester Feld and Robert Lachman to discuss respiratory protection required of P.A. personnel and future specifications for asbestos contracts.

On March 12, 1985, Philip Taylor and Charles Agro were assigned to follow-up on the area that was observed on Friday, March 8 and for an in-depth analysis of the renovation construction activities on the 36th floor.

The following deficiencies were noted at that time:

1. A construction worker was installing and insulating a small ventilation extention duct while small pieces of asbestos fell from the support beams to the floor.

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2. Asbestos waste was being swept without pre-moistening, collected and emptied into green asbestos bags located near the entrance of the work site. There were seven bags in total-six were sealed and one was opened.

3. The work site was extremely dust laden with signs of physical damage to the asbestos material on the support beams due to on-going construction work related to the sprinkler and ventilation duct work installation.

4. Pieces of asbestos fallout material was observed on the floor of the work site.

5. At the time of this survey, the work being performed without any approved respiratory protection. Later in the morning, an assortment of respiratory masks were observed, such as cartridge filters and filter masks. However, the filter masks had no NIOSH/OSHA approved stamp.

6. Some workers were observed with visible dust on their clothing and in their hair.

7. The entrance to the construction site was improperly designed in that barriers were not installed between the office corridor and the work site. The existing plastic curtain was blowing outward from the construction site due to the air velocity from within the work space. This plastic barrier was not designed to be air-locking.

8. There was no decontamination area for workers and equipment to pass through without causing contamination within the corridor. With each passage, the plastic barrier was blown outwards.

9. The West corridor carpet outside the work site was dust ladened with construction debris and asbestos material (Sample, WTC-3-CA). Dust marks leading down the West corridor to the service elevators were noted.

10. Construction dust was observed on public elevator lobby carpet. Construction workers were using public elevators for transporting materials out of the work site.

11. On the West corridor walls, patches of dust were noted.

12. In addition, there were several missing ceiling tiles. Within the work area, there is a connection between the air plenum and the work site due to an opening above the door. This could result in asbestos fibers being released outside the work area into other sections of the building.

13. There were no means of preventing fiber reintrainment.

The following samples were taken:

Sample Identification	Location	Result
Air WTC-2-CA	25 feet west of containment center in work site	0.12/cc
Bulk WTC-3-CA	Bulk samples from carpeting outside work site	Positive chrysotile asbestos
Bulk WTC-4-CA	Dust material collected on millipore filters approximately 4 feet from construction site entrance	Positive chrysotile asbestos
Bulk -5-CA	Identical to WTC-4-CA taken 1 foot from work site entrance	Positive chrysotile asbestos
Air WTC-6-CA	Air testing taken at west corridor 15 feet from construction site entrance	0.07/cc
Bulk WTC-7-CA	Bulk sample taken from garbage bag in construction site	Positive chrysotile asbestos
Bulk WTC-8-CA	Identical to WTC-4-CA and WTC-5-CA approximately 25 feet from entrance	Positive chrysotile asbestos
	Air samples pump used: Millipore Serial #0876 11 liters per minute with an airborne sampling time of two hours.	

te: E.P.A. recommends a level of 0.01/cc for reentry into asbestos work area.

Based upon the above, all work should cease immediately until the following measures are instituted.

1. All construction personnel should be equipped with NIOSH approved HEPA cartridge respirators.

2. A decontamination barrier should be erected in the West corridor to prevent fiber reintrainment and asbestos exposure outside the renovation area. This barrier must be designed with air locking plastic or suitable materials separating the work area, the contaminated area, and the clean area. The walls, floors and ceilings within these containment areas should be covered with plastic sheets or masonite boards.

3. In order to maintain the integrity outside the work area, disposable suits must be worn while in the work site and removed each time the site is left.

4. All clean-up inside the construction site must be done by wet mopping and a HEPA vacuum cleaner.

5. The West corridor carpet and corridor area must be cleaned with a HEPA vacuum.

6. Any piece of equipment leaving the work site must be decontaminated by using the HEPA vacuum and the damp mop procedure.

7. All asbestos waste must be properly moistened and packed in approved asbestos removal bags. Before transporting the bags, the exterior surfaces of the bags must have no visible dust.

8. It is recommend that a negative pressure (micro trap) unit be used in the area.

If you would require any additional information, please let me know.

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HRP:jl